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REMARKS

The application has been reviewed in light of the final Office Action dated February 1, 2007. Claims 1-70 are pending in this application. By the present Amendment, claim 46 has been amended to clarify the claimed subject matter. Applicant submits that no new matter and no new issues are introduced by the amendment. Therefore, claims 1-70 are presented for reconsideration in this application, with claims 1, 23, 46 and 58 being in independent form.

Claims 46-69 were rejected under 35 U.S.C. §101 as purportedly directed to non-statutory subject matter.

It is contended in the Office Action that each of independent claims 46 and 58 "is directed to an abstract idea that does not produce a concrete, useful, and tangible result, in that the method merely *manipulates data*."

Applicant respectfully points out that such contention represents a misunderstanding and mischaracterization of the claimed subject matter.

This application relates to the processing of graphical drawing instructions. For example, when an image is formed using page printers, contents of the image are generally specified with graphical drawing instructions. It is becoming increasingly common to print complex images comprising compositions of elements through the processing of a series of graphical drawing instructions. However, such processing can be time-consuming and in many instances, in a conventional approach, all or a portion of the product of an earlier-executed instruction is negated by a later-executed instruction.

Applicant devised an improved approach for processing graphical drawing instructions which includes determining whether a drawing process corresponding to a graphical drawing instruction, from a plurality of graphical drawing instructions, can be omitted by an image

formation apparatus, based on a drawing attribute of a pattern corresponding to the graphical

drawing instruction, and making the graphical drawing instruction invalid if it is determined that

the drawing process can be omitted by the image formation apparatus, such that no drawing

operation is performed based on the graphical drawing instruction. Each of independent claims

1, 23, 46, and 58 of the present application addresses these features, as well as additional

features.

Accordingly, contrary to the contention in the Office Action, the claimed subject matter

is not directed merely to manipulating data. Indeed, the term "data" is not used in independent

claims 1, 23, 46, and 58 at all.

The claimed subject matter clearly results in the useful, tangible output of one or more

graphical drawings. Surely the Examiner does not contend that the thousands of patents granted

by the United States Patent Office directed to printing, image formation and display technologies

are invalid for lack of patentable subject matter??

Withdrawal of the rejection of the claims 35 U.S.C. § 101 is respectfully requested.

Claims 1-70 were rejected under 35 U.S.C. § 103(a) as purportedly unpatentable over

U.S. Patent No. 6,456,298 to Kunimasa et al. in view of in view of U.S. Patent No. 6,100,998 to

Nagao et al.

Kunimasa, as understood by Applicant, proposes an approach for processing images

wherein an input drawing instruction is converted to a drawing object and a drawing logical

arithmetic process instruction, it is determined whether the drawing logical arithmetic process

instruction has content to be drawn without logical arithmetic process or not, and if the

instruction is determined to have content to be processed without drawing logical arithmetic

process, the determined drawing logical arithmetic process instruction and drawing object are converted to those which do not require the drawing logical arithmetic process.

As acknowledged in the Office Action, Kunimasa does not teach or suggest making a graphical drawing instruction invalid if it is determined that the drawing process can be omitted by the image formation apparatus, and making other graphical drawing instructions valid.

However, it is contended in the Office Action that Kunimasa, column 5, lines 14-34, discloses determining whether a drawing process corresponding to a graphical drawing instruction, out of a plurality of graphical drawing instructions, can be omitted based on a drawing attribute of a pattern corresponding to the graphical drawing instruction.

Applicant disagrees.

Kunimasa, column 5, lines 14-34, states as follows:

> Out line of operation in the preferred embodiment of the present invention will then be explained. When the drawing instruction including the drawing logical arithmetic process instruction is input to the drawing instruction conversion unit 1 is input, the drawing instruction conversion unit 1 converts the input drawing instruction to the drawing object and drawing logical arithmetic process instruction and then stores these to the drawing object memory unit 2. The drawing logical arithmetic process instruction determination unit 3 *determines whether one drawing logical arithmetic process instruction or a plurality of continuous drawing logical arithmetic process instructions stored in the drawing object memory unit 2 have the instruction content to be drawn without any drawing logical arithmetic process or not. When the instruction content is determined, as a result, to be processed without any drawing logical arithmetic process,* the drawing object conversion unit 4 converts the determined *drawing logical arithmetic process instruction and drawing object to those which do not require the drawing logical arithmetic process* and continues the subsequent processes by the other processing units.

Accordingly, Kunimasa is concerned with determining whether a particular type of processing technique (that is, a particular logical arithmetic process) is being used by one or more particular instructions, and if such particular technique is **not** being used by the instructions, determining that the instructions and drawing object can be converted into another

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form which does not require performing the particular processing technique. However, while Kunimasa proposes determining whether certain instructions use a particular processing technique, Kunimasa is not concerned with whether certain processing techniques represented by the instructions _can be_ omitted and the instructions made invalid. That is, Kunimasa does not teach determining whether certain instructions can optionally be processed without said techniques.

For example, in the process shown in Kunimasa, Fig. 7 which is described in Kunimasa, column 10, lines 42-67, and column 11, lines 1-30 (cited in the Office Action), first drawing information is obtained and it is determined whether the logical arithmetic code in the first drawing information is a particular code (90). If the code is 90, then the system performs a first set of steps, and otherwise the system performs a different set of steps.

Kunimasa clearly does not teach or suggest that any instructions are omitted or rendered invalid so as not to be executed. Each instruction, in one form or another, is performed and not omitted in the approach proposed by Kunimasa.

Nagao, as understood by Applicant, proposes a print processor which converts print data into intermediate data, rasterizes the intermediate data into a predetermined data structure, and predicts an amount of time for rasterizing the intermediate data on the basis of the number and size of the graphics in the intermediate data.

It is contended in the Office Action that Nagao, Fig. 3, and column 9, lines 37-41, and column 10, lines 23-32, proposes making a graphical drawing instruction invalid if it is determined that the drawing process can be omitted by the image formation apparatus. Applicant disagrees.

Nagao, column 9, lines 37-41, states as follows:

... The output image headers and output image data thus generated are transferred to the trapezoid data managing unit 320. The drawing state storing unit 313 stores drawing-related information furnished by the instructions from the instruction executing unit 311. The vector data generating unit 314 *generates vector data to be drawn through the use of the instructions and their attached information* from the instruction executing unit 311, of the information from the drawing state storing unit 313, and of the information from the font managing unit 315.

Nagao, column 10, lines 23-32, as follows:

The token interpreting unit 310 interprets the tokens coming from the parsing unit 30, *transforms the tokens into internal instructions* and their arguments, and transfers a set of these internal instructions and arguments to the instruction executing unit 311. The *internal instructions illustratively include drawing instructions for drawing text, graphics and images, as well as drawing state instructions for setting colors, line attributes and other information necessary for drawing.*

The instruction executing unit 311 executes the instructions sent from the token interpreting unit 310. The *instructions executed by the instruction executing unit 311 are constituted primarily by drawing instructions and drawing state instructions.* ...

Thus, Nagao proposes converting tokens from the parsing unit 30 into internal instructions which include drawing instructions and drawing state instructions, and generating vector data utilizing the internal instructions. Nagao does not teach or suggest that any instructions are omitted or rendered invalid.

The drawing instructions in Nakao are used for drawing text, graphics and images, and the drawing state instructions are used for setting colors, line attributes and other information necessary for drawing. Such drawing instructions and drawing state instructions are entirely unrelated to rendering an instruction invalid or omitting the instruction.

It is clear from Nagao, Fig. 3, column 9, lines 37-41, and column 10, lines 23-32, which is cited in the Office Action, that Nagao, like Kunimasa, does not teach or suggest (a) determining whether a drawing process corresponding to a graphical drawing instruction, out of a plurality of graphical drawing instructions, can be omitted based on a drawing attribute of a

pattern corresponding to the graphical drawing instruction, and (b) making a graphical drawing instruction invalid if it is determined that the drawing process can be omitted by the image formation apparatus, and making other graphical drawing instructions valid.

Since neither Nagao nor Kunimasa teaches or suggests these features, the combination of the two references of course also fails to teach or suggest these features.

Applicant simply does not find teaching or suggestion in the cited art, however, of information processing approach which comprises (a) determining whether a drawing process corresponding to a graphical drawing instruction, out of a plurality of graphical drawing instructions, can be omitted based on a drawing attribute of a pattern corresponding to the graphical drawing instruction, and (b) making the graphical drawing instruction invalid if the drawing omission determination unit determines that the drawing process can be omitted, and makes other graphical drawing instructions valid, as provided by the subject matter of independent claim 1.

Independent claims 23, 46 and 58 are patentably distinct from the cited art for at least similar reasons.

Accordingly, for at least the above-stated reasons, Applicant respectfully submits that independent claims 1, 23, 46 and 58, and the claims depending therefrom, are patentable over the cited art.

In view of the remarks hereinabove, Applicant submits that the application is now in condition for allowance, and earnestly solicits the allowance of the application.

If a petition for an extension of time is required to make this response timely, this paper should be considered to be such petition. The Patent Office is hereby authorized to charge any
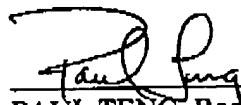
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fees that are required in connection with this amendment and to credit any overpayment to our

Deposit Account No. 03-3125.

     If a telephone interview could advance the prosecution of this application, the Examiner

is respectfully requested to call the undersigned attorney.

                             Respectfully submitted,

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